Senecio roseiflorus R. E. Fries	KENYA: Central Prov., Nanyki Dist., N.W. slope of Mt. Kenya, *Lewis* 5918.	*ca.* 10	
Senecio sarmentosus O. Hoffm.	KENYA: Central Prov., Meru Dist., 9 miles N.E. of Runyemje's, *Lewis* 5913.	20	
Senecio serratuliodes DC.	S. AFRICA: Transvaal Prov., Pretoria Dist., near Fountain Valley, Pretoria, *Lewis* 6353.	10	
Senecio torticaulis Merscm.	S. RHODESIA: Salisbury Dist., Salisbury, Cranborne, *Lewis* 6255.	10	
Senecio variabilis Sch. Bip.	TANGANYIKA: Southern Highlands Region, Mbeya area, Mbeya range, *Lewis* 6076.	30	
Senecio variabilis Sch. Bip.	N. RHODESIA: Northern Prov., Abercorn Dist., Sunzu Gorge, *Lewis* 6100.	10	
Senecio sp.	N. RHODESIA: Northwestern Prov., Mwinilunga Dist., 4 miles N. of Kalene Mission, *Lewis* 6211.	*ca.* 20	
Senecio sp.	S. AFRICA: Natal Prov., Estcourt Dist., Drakensberg Mts., base of Mt Champagne, *Lewis* 6268.	10	
Senecio sp.	SWAZILAND: Mbabane, Mbabane River, *Lewis* 6316.	10	
Tribe Arctotideae			
Berkheya erysithales (DC.) Roessl.	S. AFRICA: Natal Prov., Hlabisa Dist., 4.3 miles W. of Charters Creek, *Lewis* 6308.	8	
Berkheya setifera DC.	S. AFRICA: Natal Prov., Estcourt Dist., Drakensberg Mts., base of Mt. Champagne, *Lewis* 6269.	8	(Fig. 18)
Berkheya speciosa (DC.) O. Hoffm.	S. AFRICA: Natal Prov., Hlabisa Dist., Charters Creek, *Lewis* 6301.	8	
Haplocarpha scaposa Harv.	ANGOLA: Moxico Dist., 2 miles W. of Jimbe River by Caianda-Mwinilunga Rd., *Lewis* 6218.	9	
Haplocarpha scaposa Harv.	S. AFRICA: Natal Prov., Estcourt Dist., 3.8 miles W.N.W. of Estcourt, *Lewis* 6270.	9	(Fig. 19)
Hirpicium diffusum (O. Hoffm.) Roessler	KENYA: Coast Prov., Taita Dist., Tsaro West National Park, Kyanita Mine. *Lewis* 6036,	*ca.* 5	(Fig. 20)
Ursinia nana DC.	S. AFRICA: Transvaal Prov., Pretoria Dist., Koedoespoort, *Lewis* 6352.	8	(Fig. 21)
Tribe Calenduleae			
Osteospermum monocephalum (Oliv. & Hiern.) T. Norl.	TANGANYIKA: Southern Highlands Region, Mbeya Area, *ca.* 11 miles N.E. of Mbeya, *Lewis* 6079.	*ca.* 16	
Tribe Mutisieae			
Gerbera discolor Sond.	S. RHODESIA: Salisbury Dist., Salisbury, Makadusi River, *Lewis* 6258.	25	(Fig. 22)
Tribe Cichorieae			
Crepis iringensis Babc.	TANGANYIKA: Southern Highlands Region, Mbeya Area, *ca.* 11 miles N.E. of Mbeya, *Lewis* 6075.	4	
Heterachaena massavensis Fresen.	ETHIOPIA: Harar Prov., 7.4 Km E. of Giggiga, *Lewis* 5890.	9	(Fig. 23)

NOTES ON ACACIA SPECIES IN SOUTHERN AFRICA

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Abstract

Acacia retinens Sim and *A. gillettiae* Burtt Davy have proved to be a single species. The former which was published earlier takes precedence and the latter is transferred to synonymy.

Points of similarity and difference between *A. hereroensis* and *A. mellei* are discussed and the latter transferred to synonymy.

A. retinens Sim.

Sim (1909) described *Acacia retinens* from Portuguese East Africa, citing *Sim* 6391 as the type specimen. This specimen is presumed lost since all recent efforts to locate it have so far failed.

While collecting in Portuguese East Africa Sim allocated certain numbers in the six-thousands to his specimens. Subsequently it has been revealed that specimens collected at the same time were given numbers in the twenty-thousands. It therefore seems probable that Sim gave one number to his original specimens and another to his duplicate specimens. As Sim (l.c.) cited only one number it is not possible to establish what number the duplicates carry. Unfortunately Sim's notebooks (in University of Natal Herbarium) shed no light on this subject. The possibility that a duplicate of the type specimen, bearing a number in the twenty-thousands, exists cannot be precluded but it appears unlikely that such a specimen could be identified as a duplicate of *Sim* 6391 with absolute certainty.

In his description Sim (l.c.) noted that the stipular spines are "often altered by insect parasites into hard swollen spines 3—4 cm long, 1 cm in diameter . . ." These enlarged spines are illustrated in Plate XLA. The description and illustration, plus the finding of a Sim specimen, *Sim* 6285 (NU), bearing the name *A. retinens* Sim (unfortunately without locality), leave no doubt as to what plant Sim had before him.

Burtt Davy (1932) described *A. gillettiae* from the Waterberg District of the Transvaal, citing *Galpin M*114, as the type specimen. Although this specimen bears no enlarged spines the collector's notes carry the comment "readily distinguished by few enlarged spines on every tree".

Examination of specimens of *A. gillettiae* and *A. retinens* revealed that the two consitute a single species, for which the name *A. retinens* takes precedence.

Henkel (1934) regarded *A. gillettiae* as being synonymous with *A. retinens* but this appears to have been overlooked.

SPECIMENS EXAMINED

A. retinens Sim in For. and For. Res. of P.E.A.: 57 (1909); Henkel in Woody Plants of Natal and Zululand: 230 (1934).

Synonym *A. gillettiae* Burtt Davy in Man. Fl. Pl. of Tvl.: 343 (1932). Type: Transvaal, Waterberg Distr., *Galpin M*114 (K, holo.)

MOZAMBIQUE: LOURENCO MARQUES DISTR.: Umbelusi, *Gerstner* 6688 (BOL).

TRANSVAAL: PRETORIA DISTR.: Rooikop, *Smuts & Gillett* 2514 (PRE); Bosplaas, 34 miles N. of Pretoria, *Mogg* 14763 (PRE); 12 miles S. of Pienaars River, *Mogg* 16823 (PRE); 32 miles N. of Pretoria, main rd. to Warmbad, *Codd* 826 (PRE). WATERBERG DISTR.: Toowoomba, *Acocks* 8887 (PRE).

SWAZILAND: HLATIKULU DISTR: Ingwavuma Poort, *Compton* 29793 (PRE). STEGI DISTR: Mtindekwa, *Compton* 32059 (PRE).

NATAL: HLABISA DISTR: Hluhluwe, *Ward* 3933 (NH, NU, PRE); 15 miles S. of Mkuze on Hluhluwe rd., *Ross* 1036 (NU). INGWAVUMA DISTR.: Ndumu Game Reserve, *Oatley* 72 (NH); do., W. area, *Ross* 650, 664, 715 (NU); do., southern shore of Nyamiti Pan, *Ross* 671 (NU); between Otoboteni and Ubombo, *McClean H*18481 (NH). NGOTSHE DISTR.: Pongola Settlement, *Gerstner* 2860 (NH); Mkuze Drift, ± 10 miles S. of Magudu on Nongoma rd., *Ross* 1105 (NU); Jozinidam rd., W. slope of Lebombo Mts., *Ross* 1112 (NU). UBOMBO DISTR.: Mkuze, *A. W. Bayer* 599 (NU); do., *Gerstner* 2848 (NH); Mkuze Game Reserve, *Ward* 4008 (NH, NU, PRE); do., *Tinley* 771 (NU); do., *Ross* 306, 1167 (NU); do., *Lawson* 1015 (NU); 3 miles from Mkuze on Nongoma rd., *Ross* 1031 (NU).

A. hereroensis Engl.

Verdoorn (1942), described *Acacia mellei* from the Transvaal and Bechuanaland. Concerning related species Verdoorn (l.c.) noted: "In South-West Africa the species *Acacia hereroensis* approaches it, but in this case the leaflets are smaller than those of *A. mellei*, and also the spines and pods are smaller."

A. mellei has subsequently been recorded from the north east Cape Province and the south west Orange Free State, *A. hereroensis* Engl. being apparently confined to South-West Africa. Examination of specimens, many collected since *A. mellei* was described, revealed the limits of *A. mellei* to be wider than indicated by Verdoorn (l.c.) or by Young (1955). In view of difficulty encountered while attempting to name certain specimens it was necessary to ascertain whether the alleged differences between *A. hereroensis* and *A. mellei* were real.

DISCUSSION

Examination of specimens of *A. hereroensis* and of *A. mellei* revealed that the two species do not differ from one another in flower or in fruit structure. Furthermore, specimens of the two species agree in bark characteristics; in the degree of pubescence of the young branchlets and rachises; in the frequent presence of minute scattered red glands amongst the translucent hairs on the young branchlets and rachises, and of small recurved prickles on the abaxial rachis surfaces; in leaflet size, shape and degree of pubescence.

The differences recorded between the two species are shown in Table 1.

TABLE 1

A synopsis of the differences between *A. hereroensis* Engl. and *A. mellei* Verdoorn

A. hereroensis	*A. mellei*
Prickles up to 7.0 (4.0 ± 2.0) mm. long	Prickles up to 8.0 (5.0 ± 2.0) mm. long
Petiole 0.3–2.2 (1.0 ± 0.4) cm. long	Petiole 0.3–1.4 (0.8 ± 0.3) cm. long
Rachis 1.7–10.0 (4.3 ± 2.2) cm. long	Rachis 2.5–7.5 (4.8 ± 1.7) cm. long
8–26 (15 ± 4) pinna pairs	7–21 (14 ± 4) pinna pairs
Rachilla 0.5–2.6 (1.5 ± 0.6) cm. long	Rachilla 0.8–3.4 (2.1 ± 0.7) cm. long
16–48 (29 ± 9) pinnule pairs	17–37 (28 ± 7) pinnule pairs
Pinnule 1.0–3.3 (2.0 ± 0.9) mm. long, 0.5–1.1 (0.8 ± 0.2) mm. wide	Pinnule 1.3–3.1 (2.2 ± 0.7) mm. long, 0.5–1.1 (0.9 ± 0.2) mm. wide
Flower spikes 2.2–8.6 (4.6 ± 2.0) cm. long	Flower spikes 2.4–6.9 (4.7 ± 1.8) cm. long
Peduncle 0.3–2.0 (1.3 ± 0.5) cm. long	Peduncle 0.4–2.8 (1.3 ± 0.6) cm. long
Calyx subglabrous to densely pubescent	Calyx puberulous to densely pubescent
Pods 6.0–13.6 (9.1 ± 2.7) cm. long, 0.9–2.1 (1.5 ± 0.4) cm. wide	Pods 5.7–13.0 (9.4 ± 2.0) cm. long, 1.2–2.1 (1.6 ± 0.4) cm. wide

Although the prickles of *A. hereroensis* are slightly smaller than those of *A. mellei* it may be seen that the leaflets and pods of the former species are not smaller than those of the latter species as stated by Verdoorn (l.c.), but are sometimes slightly larger than those of *A. mellei.*

The means for each character of *A. hereroensis* intergrade with the means for each corresponding character of *A. mellei* so that no distinction can be drawn between *A. hereroensis* and *A. mellei* on the basis of any one of the above